KISSdesign on System Level

In KISSsoft, a new solution for the rapid creation of concepts for gearboxes is available: KISSdesign.

Particularly in the initial phase of a project, an engineer needs to be able to roughly model different variants of possible solutions in order to compare critical criteria. This requires a simple, quick and uncomplicated model design.

Possibilities of KISSdesign

- Rapid design of gearbox concepts
- Intuitive user guidance and clear overview
- Integration with KISSsoft modules

In KISSsoft, in addition to elementary components (gear pair, bearing or shaft/bearing system), you can now design complete gearboxes in a separate module.

The different speeds, torques, input and output powers can be directly specified and gathered from a clear table.

Sketcher functionality

- Quick definition of multiple variations
- 3D view of the model

With the sketcher, the user can create their own models by simply drawing them as they would on a piece of paper.

This symbolic representation allows them to define very quick multiple variations of a kinematic concept.

Moreover, when sketching, the elements are automatically added to the tree with their default geometry.

The main focus of KISSdesign lies in quick concept building and simple kinematics calculations, i.e. all speeds and torques. These are used as the basis for the individual KISSsoft modules which are involved.

The sketch view ("sketcher") provides an abstract overview of the complete transmission system, whereby the individual elements of the model can be changed easily. A 3D view of the model is then generated and updated whenever a change is made in the sketcher.

The geometry is built up from simple cylinders in this initial phase. The geometry can be defined in detail later by the user.
With a double click, the user can then access the shaft and gear sub calculation modules from the tree where all data is automatically transferred from the system. There they can refine their geometry and perform the usual strength calculations according to each sub module.

**Shifting transmissions**

Shifting transmissions are also very easy to create. The user can just drop the elements needed in the tree, draw them in the sketcher or even mix both methods.

Once the shifting elements and the gears are connected, and the input power is defined, the user can use the lay out function of the speed table.

All possible shifting speeds are then generated, and all shifting elements in the model are automatically set open or closed for each speed.

The user can simply switch from one to another to see the power flow updated in the KISSdesign 3D viewer.

The kinematic calculation always runs in the background to instantly provide speed and torque input for all shaft and gear modules in the model.

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**Benefits of KISSdesign**

- Sketcher functionality
- Clear tree structure
- Intuitive system modification

The sketch view provides an abstract overview of the complete transmission system, whereby the individual elements of the model can be changed easily.

The representation in a tree structure allows a consideration of the shafts and their components.

Great emphasis was placed on the simple and intuitive system modification.

KISSdesign allows simple modeling of entire transmissions and quick setup of models with minimal prior knowledge.

If you are interested in KISSdesign, please consult our YouTube channel and/or contact us directly at info@KISSsoft.AG